A shower water-saving device with dual functionalities: collecting water from a showerhead and watering household or landscape plants. The device can be used to conveniently catch the leading cold or lukewarm water from the shower head, which would otherwise be wasted, while the person taking the shower is waiting for the water with proper temperature to come out. After collecting the shower water, it can then be easily transformed, by attaching a lid (preferably having a spout) to the top opening of the bucket, into a hand-held watering bucket and be used to water household plants or plants in the garden or on the lawns.
SHOW WATER-SAVING DEVICE

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims benefit of U.S. Provisional Application No. 60/985,988, filed Nov. 7, 2007, the contents of which are incorporated herein in its entirety by reference.

FIELD OF THE INVENTION

[0002] The invention relates to a shower-water saving device, more particularly to a device having dual functions of saving water and watering plants.

BACKGROUND OF THE INVENTION

[0003] Certain areas in the world are facing a serious problem of water shortage. Yet, even under such circumstance, there exists certain practice which leads to fresh water being wasted. For example, when taking a shower, a significant amount of cold or lukewarm water is wasted while the person who takes the shower is waiting for the water of a suitable temperature.

SUMMARY OF THE INVENTION

[0004] Accordingly, one object of the present invention is to provide a device with dual functionalities: collecting water from the showerhead and watering household or landscape plants. Specifically, the device can be used to easily catch the water coming from the shower head so that the leading cold or lukewarm water would not be wasted while waiting for water with suitable temperature for taking a shower and, after collecting the shower water, it can then be easily converted, by attaching a lid (preferably having a spout) to the top opening of the bucket, into a hand-held watering bucket and be used to water household, garden and landscape plants.

[0005] The shower water-saving device of the present invention provides a way of helping households optimize the use of their water, save money and contribute to the effort of environment protection.

[0006] As one embodiment of the present invention, the device comprises a lid, spout and bucket. Different from a conventional watering bucket, the lid and bucket are not integral, but rather two separate pieces. Nonetheless, the lid can be easily, without needing any tools, attached to the bucket to provide a watertight enclosure covering the top opening of the bucket. The spout may be preferably installed on the lid but it may be installed on the sidewall of the bucket. The diameter of the bucket may be between 30-50 cm, and the height between 30-60 cm. The lid and bucket may be made of the same or different materials, preferably of a plastic material, although other materials may also provide satisfactory results.

[0007] As another embodiment of the present invention, the device may optionally further comprises a funnel, which is configured to be attached to the opening of the bucket for more easily catching the water falling from the shower head as it in effect increases the diameter of the bucket’s top opening for the purpose of collecting water drops. The funnel is to be removed from the bucket after collecting the water and before attaching the lid to the bucket.

[0008] The various features of novelty which characterize the invention are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages, and specific objects attained by its use, reference should be made to the drawings and the following description in which there are illustrated and described preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIGS. 1(a)-1(d) show the top, side, bottom and perspective views of an optional funnel of the shower water-saving device according to an embodiment of the present invention.

[0010] FIGS. 2(a)-2(d) show the top, side, bottom and perspective views of a lid of the shower water-saving device according to an embodiment of the present invention.

[0011] FIGS. 3(a)-3(e) show the top, side, bottom and two perspective views of a bucket of the shower water-saving device according to an embodiment of the present invention.

[0012] FIGS. 4 and 5 show the optional funnel being attached to the bucket of the shower water-saving device.

[0013] FIG. 6 shows the components in a detached state of a shower water-saving device according to the present invention, which includes a bucket, a lid, and an optional funnel.

[0014] FIGS. 7 and 8 show the lid being attached to the bucket of the shower water-saving device.

[0015] FIGS. 9(a) and 9(b) show the bucket of the shower water-saving device with a flip top handle.

DETAILED DESCRIPTION OF PARTICULAR EMBODIMENTS

[0016] With reference to FIGS. 1(a)-3(e), as a particular embodiment of the present invention, the shower water-saving device has a bucket 10 which for the purpose of this invention defined as a container with a top opening 12, a cover or lid 20 which can be detachably attached to the top opening 12 of the bucket 10, and an optional detachable funnel 30 which can be detachably attached to the top opening 12 of the bucket 10.

[0017] The bucket 10 may have a handle 14 on its sidewall, which can be of any conventional types. A recessed type handle may be provided since it is less obtrusive when used in the shower. A preferred size for the bucket 10 is a diameter of about 40 cm and a height of about 50 cm, which can contain approximately 10 liters of water, an equivalent of a medium sized watering can. However, this device can be made in any size that suits any particular purpose. For example, the diameter may be in the range between 30 cm and 50 cm, and the height between 30 cm and 60 cm.

[0018] As shown in FIGS. 2(a)-(d), the lid 20 has a watering spout 22 at one side and a small opening 24 at the opposite side. This small opening 24 provides a vent for the air to come in to release the vacuum created in the bucket 10 due to the decreased volume of the water inside the bucket 10 while watering takes place. Thus the opening 24 allows the water to come out of the spout 22 easily. When the lid 20 is attached to the bucket 10, this opening 24 on the lid 20 also allows the device to be filled by a hose as it is with a standard watering bucket. The spout 24 may be disposed on the sidewall of the bucket 10 but preferably it is disposed on the lid 20. A long spout can be obtrusive in a small space, such as in a shower or bathroom. Thus it is preferable to install it on the lid 20, which is less likely to be bought into the shower or bathroom where the bucket 10 is used for collecting the water.

[0019] The optional funnel 30 increases the surface area for catching the water that falls from the showerhead. It can be
used for increasing water collection efficiency, particularly when the bucket is 30 cm in diameter or less, and it can provide an extra 20 cm or more in diameter for the water collecting area.

The bucket 10, lid 20, spout 22 and funnel 30 may be made of the same or different materials. Light, hard wearing plastic such as PVC, HDPE, PP or other, are examples of the materials suitable for manufacturing the items described above, although other materials may also be satisfactorily used.

A screwing mechanism in the form of threads 18, 28, 38 provided on the bucket 10, lid 20 and funnel 30 is used for attachment. Obviously, people with ordinary skill in the art may find other coupling mechanisms also produce satisfactory results. For example, a clipping mechanism may be employed. A pad of soft material, such as a soft rubber, may be operatively coupled to the threads 18, 28, 38 and subject to a degree of compression when the lid 20 (or the funnel 30) and the bucket 10 are screwed together. This soft material pad plays a gasket-like role, which provides a watertight seal between the lid 20 (or the funnel 30) and bucket 10 to prevent leakage when the shower water-saving device is tilted in order to water plants.

FIGS. 7 and 8 show the shower water-saving device when the lid 20 is attached to the bucket 10 in a state ready for watering. As shown, the vacuum-release opening 24 on the lid 20 is preferably aligned to the bucket's side handle 14 when the device is in a state ready for watering.

FIGS. 4 and 5 show the shower water-saving device when the optional funnel 30 is attached to the bucket 10 in a state ready for collecting shower water. The optional funnel 30 has an upper rim 32 and a lower rim 34, which is attachable to and detachable from rim 19 of the bucket 10.

An optional flip top handle 16 is attached to the bucket 10. The flip top handle 16 helps making the bucket 10 easier to get out of the shower.

When used to collect water from the showerhead, the shower water-saving device of the present invention should be configured to be in a state for collecting water, that is, the bucket 10 without the lid attached. The bucket 10 is then placed beneath the showerhead to catch the leading cold water while waiting for the water at a temperature suitable for taking a shower. Optionally, a funnel 30 can be attached to the bucket 10, as shown in FIGS. 4 and 5, to increase the water-catch area, particularly when the top opening 12 of the bucket 10 is relatively small. When the bucket 10 collected enough water, from one or more showers, the water-saving device can be put in a state for watering plants by removing the funnel 30, if it is used, from the bucket 10 and then attaching the lid 20 to the bucket 10, as illustrated in FIG. 6. The water-saving device may then be carried out of the shower or bathroom, preferably by using an optional flip top handle 16, as shown in FIGS. 9(a) and 9(b), and used for watering plants in a manner much like a conventional watering can, or emptying water from the bucket 10.

As the components of the shower water-saving device, such as the bucket 10, lid 20, spout 22, handle 14, and funnel 30 can be manufactured and put together according to conventional methods known to people in the art, description of their manufacturing processes is unnecessary.

While there have been described and pointed out fundamental novel features of the invention as applied to a preferred embodiment thereof, it will be understood that various omissions and substitutions and changes, in the form and details of the embodiments illustrated, may be made by those skilled in the art without departing from the spirit of the invention. The invention is not limited by the embodiments described above which are presented as examples only but can be modified in various ways within the scope of protection defined by the appended patent claims.

What is claimed is:

1. A water-saving device, comprising a bucket with a top opening and a sidewall, a spout, and a lid; said top opening having a rim; said lid being attachable to and detachable from said rim of said top opening of said bucket; and said spout is either disposed on said lid or disposed on said sidewall of said bucket.

2. The water saving device of claim 1, wherein said spout is disposed on said lid.

3. The water saving device of claim 1, further comprising a funnel having an upper rim and a lower rim, which is attachable to and detachable from said rim of said top opening of said bucket.

4. The water saving device of claim 1, further comprising a handle disposed on said sidewall.

5. The water saving device of claim 4, wherein said handle is of a recessed type.

6. The water saving device of claim 1, wherein said bucket has a diameter between 30 cm and 50 cm and a height between 30 cm and 60 cm.

7. The water saving device of claim 6, wherein said bucket has a diameter of 40 cm and a height of 50 cm.

8. The water saving device of claim 6, wherein there is an orifice on said lid to allow passage of the air.

9. The water saving device of claim 1, further comprising a flip top handle disposed at an upper portion of said bucket.

10. A method of conserving shower water, comprising steps of:

(a) connecting a funnel with an upper rim and a lower rim to a container with an upper opening having a rim so that said lower rim of said funnel is in contact with said rim of said opening of said container;

(b) before taking a shower, collecting leading water from a shower head by placing said container below said shower head to allow an amount of leading water from said shower head to fall through said upper rim of said funnel into said container; and

(c) replacing said funnel with a lid by removing said funnel from said container and connecting said lid to said rim of said opening of said container so that said container functions like a hand-held watering bucket.

11. The method of conserving shower water of claim 10, comprising a further step of:

(d) taking said container with said lid out of a shower room to a place for watering a plant.

12. The method of conserving shower water of claim 10, wherein said container has a diameter between 30 cm and 50 cm and a height between 30 cm and 60 cm.

13. The method of conserving shower water of claim 10, wherein said container has a diameter of 40 cm and a height of 50 cm.

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